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## NOTES ON GLOSSAMIA AND RELATED GENERA OF CARDINAL FISHES.

The genus *Glossamia* as Mr. Allan R. McCulloch (Records Australian Museum, February 20, 1917), has shown, is based on *Apogon aprion* Richardson, a species quite distinct from the American species called *Glossamia pandionis* Goode & Bean.

*Glossamia* has few and short gill rakers, 6 developed, and also a small patch of teeth on the tongue. In the typical species the scales are small, 40 to 43. In a second species, *Glossamia gilli* (Steindachner), with which species the type of *Mionurus* Krefft (*M. lunatus*), is identical, the scales are larger, 26 to 31. In both the nape is depressed giving an S-shaped contour to the region before the dorsal fin.

The genus called *Glossamia* by Goode and Bean (Oceanic Ichthyology, 1895, 231), may be known as *Xystramia* Jordan, new genus, from its long and numerous gill rakers (about 14). Its type is *Glossamia pandionis* Goode & Bean.

The genera of small Apogonids having the preopercle entire on both limbs have been much confused by authors, not least by the present author. They may be thus compared:

- a. Preopercle with both limbs entire; anal fin short, its rays about II, 8, no canines.
- b. Palatines with teeth.
- c. Lateral line complete or very nearly so.
- d. Body much compressed and elevated; dorsal spines produced; gill rakers long, slender, 6+21; scales large; caudal forked, (*Mionurus* Jordan & Seale, Fishes Samoa, 1906, 247, not of Krefft, 1867), (type *Apogon graeffi* Gunther); ZORAMIA Jordan, new genus.
- dd. Body not much compressed and elevated; spinous dorsal low; caudal rounded or truncate.

- e. Gill rakers few and small; (about 6), profile before dorsal S-shaped; scales rather small; tongue with small teeth (type *Apogon aprion* Richardson); GLOSSAMIA Gill.
- ee. Gill rakers numerous, slender (12 to 14); profile nearly even from snout to dorsal.
- f. Scales small (about 45); (type *Glossamia pandionis* Goode & Bean); XYSTRAMIA Jordan.
- ff. Scales large, about 25 (type *Apogonichthys perdia* Bleeker); APOGONICHTHYS Bleeker.
- cc. Lateral line incomplete; scales large; caudal rounded; (type *Fowleria brachygramma* Jenkins); FOA Jordan & Evermann.
- bb. Palatines without teeth; scales large; caudal rounded; gill rakers few, short; opercle with a large black spot; (type *Apogon auritus* Cuv. & Val.); FOWLERIA Jordan & Evermann.

One of the species hitherto referred to *Amia* or *Apogon*, *Apogon fuscus* Quoy & Gaimard from Guam and Samoa, differs from the type of the genus in the long and rounded caudal fin, attached to a long caudal peduncle as long as head. It has large scales and six dorsal spines. It may be regarded as the type of a distinct genus, NECTAMIA Jordan, allied to *Apogonichthys*. In *Apogon* (*Amia*) proper and in the subgenus *Ostorhynchus* (seven dorsal spines) the caudal fin is forked or at least lunate. The Japanese species, *niger marginatus*, *unicolor* and *lineatus* have the caudal subtruncate, but in other regards these more nearly resemble *Apogon*, the caudal being short, its peduncle much shorter than head.

*Apogon evermanni* Jordan and Snyder from Hawaii with very small scales (54) forked caudal and six dorsal spines should be placed in the genus *Lepidamia* Gill, type *Apogon kalosoma* Bleeker.

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